

Name: _____ Date: _____ Period: _____

Unit 2 Test – Form A

45

Name the set of numbers to which each number belongs. **(6 points)**

| | | |
|------|----|-------------|
| -600 | 60 | $\sqrt{99}$ |
| | | |

True or False. If false, please provide a counterexample. **(3 points)**

| | |
|---------------------------------------|---|
| _____ All integers are whole numbers. | _____ Some fractions are whole numbers. |
|---------------------------------------|---|

Identify the independent and dependent variables in the situation. Then find a reasonable domain and range. **(4 points)**

Situation: Tim mows lawns as a weekly job. He charges \$15 per lawn. Tim can mow as many as 9 lawns throughout the week.

| | |
|------------------------------|----------------------------|
| Independent Variable: | Dependent Variable: |
| | |
| Domain: | Range: |
| | |

The relationships in the table below is a function. Define your variables and write a function rule to describe the relationship. **(3 points)**

| Number of weeks | Total Savings |
|-----------------|---------------|
| 1 | \$52 |
| 2 | \$64 |
| 3 | \$76 |
| 4 | \$88 |

Define:

Function Rule:

Between what two consecutive integers is each square root? **NO CALCULATOR! (3 points)**

$$\sqrt{175}$$

$$\sqrt{21}$$

$$\sqrt{255}$$

Simplify each square root. **NO CALCULATOR! (3 points)**

$$\sqrt{144}$$

$$-\sqrt{225}$$

$$\sqrt{\frac{49}{144}}$$

Simplify each square root. Round your answer to the nearest hundredth. **(3 points)**

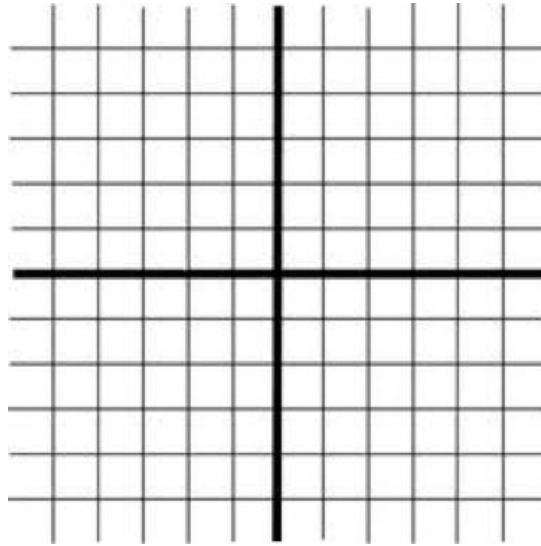
$$\sqrt{188}$$

$$\sqrt{-872}$$

$$\sqrt{53}$$

Plot the following points on the coordinate plane. **(1 point)**

A (4, -1) B (-5, 2)



Calculate the distance. **(4 points)**

a. Label

b. Copy

c. Substitute

d. Answer

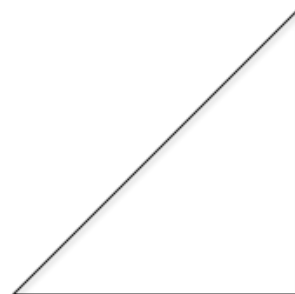
Who was Pythagoras? **(1 point)**

Who were Pythagoreans? What did they believe in? **(2 points)**

Describe the Pythagorean theorem. Write in complete sentences. **(3 points)**

A triangle has side lengths 12 in, 14 in, and 16 in. Is this a right triangle? **(2 points)**

Find the length of the missing side. **(2 points)**



Use the Pythagorean theorem to solve the following situation.

Situation. Mr. Figueroa needs to hang a banner 11 ft up on the front of the school building. He has a 15 foot ladder. How far away does he need to place the ladder in order to reach the spot on the building where he needs to hang the banner? **(4 points)**

Step 1:

Step 2:

Step 3:

Step 4:

Math Honor Code (1 point): Please copy this statement below, then sign your name.

My signature certifies that this is my work. I did not give or receive help on it.

X_____